



Summer Vacation Getaway - Add a Float Rating

By Crista Worthy

When it comes to pretty airplane pictures, float planes almost always win the day. Why? The airplane is usually depicted in a spectacular setting, such as a gorgeous mountain lake. There's no runway, so the perception is that the pilot has more freedom than usual and can land anywhere. Mostly, it just looks like so much fun!



Alaska Float Ratings - Photo Courtesy of Joe Erickson

It is fun, although not quite as carefree as the photos make it seem, but that's true of any aviation endeavor. So the



Alaska Float Ratings - Photo Courtesy of Joe Erickson

next time you need a flying vacation, why not shake things up a bit and go for a seaplane rating? You'll improve your flying skills in ways that transfer to land-based aircraft and you'll have some of the most fun you've ever had in an airplane. And when you're done, you'll not only have a new rating, but also that BFR signed off for another two years.

A seaplane rating is not initial training. At the very least, you should have your private pilot certificate and a current medical before you begin seaplane training. It helps to have some hours and experience under your belt and be current with your flight skills. Float flying isn't cheap, so to keep costs down, the flight schools do their best to get your training covered in as few hours as possible. If you have to spend a couple of days just knocking off the rust, you may not be able to learn the new skills required and may blow your

checkride, or, at the very least, need to schedule additional days at additional cost.

In general terms, you will begin with some ground school, then go out and familiarize yourself with the aircraft and the parts and techniques unique to floatplanes: water rudders, the floats themselves, preflight procedures, casting off, and so forth. Next, you'll fly and do some turns, stalls, and maneuvers, so you can get comfortable with the aircraft. Other lessons will focus on how to read the water from the air, wind patterns, emergency procedures, approach planning, control coordination, and takeoffs and landings. Then you'll work on step taxiing and takeoffs and landings from glassy



Flying over CDA River Photo Courtesy of Glenn Smith

Summer Getaway

Continued on page 17

INSIDE

Cockpit Conversation ...	4	Eyes on the Skies	8	UAS Maze	14
Spring Fever	7	Mountain Safety	10	Drones!	20

From the Administrator:



The mission of the Idaho Division of Aeronautics is to ensure the aviation system in Idaho meets the needs of the state. We want

Idaho to continue to be one of our nation's strongest GA advocates. In 2015 our 5,100 pilots registered 2,710 aircraft, generating \$257,000 for our state backcountry airstrips, safety/education programs and SAR activities. With the revenue received from aviation fuel taxes, we invested \$788,000 into the infrastructure of Idaho GA airports. This investment, along with the local community match, was enough to leverage \$40 million of federal aid to our state.

Our Safety/Education program has been enriched by the addition of Santiago Guerricabeitia, "Sant," an Idaho native pilot with a strong corporate, CFI and A&P background. Last year, we published our first accident scorecard and added two additional state airstrip Standard Operating Procedures (SOPs). We will be publishing a Stanley Airport SOP this spring.

One of our highlights in 2015 was hosting the annual National Association of State Aviation Officials (NASAO) convention in Boise. It was a real treat to show off Idaho aviation to over 200 participants, representing nearly every state. The last NASAO convention held in Idaho took place 57 years ago. The icing on the cake for Aeronautics was winning the NASAO aviation education award for our backcountry airstrip SOPs at the awards banquet.

This year, Airport Manager Todd Glass celebrates 33 years with Aeronautics. His expertise proved timely in 2015 as we faced an extra busy year including moving caretakers Phil and Roxie into their new dwelling at Johnson Creek, winning an arduous battle with the Big Creek beavers and spreading 20 pallets of weed and feed on many of our airfields. Todd also painted the exterior of our office building and made sure our visiting pilots were always well accommodated at our 31 state airstrips.

This coming year, in addition to regular airstrip maintenance, we will be specifically concentrating on Big Creek, Magee, Stanley and New Meadows. The nasty swells at Big Creek will be repaired and the irrigation pond expanded. Significant drainage improvement on the north end of Magee is also on the calendar, as well as improved access to Stanley. In partnership with the local aviation community, we're working on tie down improvements and a helipad location at New Meadows.

Our phones are already ringing with fly-in requests and inquiries. Todd and I are in the process of scheduling and organizing the many groups wishing to come to Idaho. Due to the interest in flying to Idaho, we have been forced to place what we feel are reasonable limitations on the larger group fly-ins to maintain a safe environment for all.

Aviation safety remains a top priority for the division. Unfortunately, 2015 was a year with 30 accidents and 11 fatalities. Idaho continues to outpace its neighboring states in GA accidents per capita and our safety/education section continues to facilitate programs to reduce this number. On the positive side, we celebrated a lot of private and commercial pilot certificate

achievements. Please continue to inform us of earned flight ratings as we like to publicly acknowledge the accomplishments in our *Rudder Flutter* publication and on our Facebook page.

Like many of you, I'm excited to get airborne for the 2016 season, and I hope many of you will participate in the programs scheduled this year. Aeronautics team members will be staffed at over a dozen trade shows, Fly-in's, FIRC's, aviation conferences and work parties. We look forward to working with all of our incredible volunteers. The combined effort helps make these wonderful programs a feasible undertaking.

Have a flying great year, and I'll see you out at the airport.

Mike Pape
ITD Aeronautics Administrator

**Do you want a FREE
subscription to the
Rudder Flutter?**

Contact the Division of
Aeronautics at
208-334-8775 or email
laura.adams@itd.idaho.gov



Snow Much Fun!

By **Santiago Guericabeitia, ITD**
Division of Aeronautics

A small but hearty group of pilots took to the skies – and snow - in Stanley, Idaho on Saturday, Feb 20 for the inaugural Skiplane Fly-in, held in conjunction with the Stanley Winterfest. More than 13 aircraft showed up. Pilots from all over Idaho and points beyond added a new dimension to the event. Other activities included the Outhouse race, Fat bike race, Howlin' Wolf raft ride and many more.

I drove to Stanley on Saturday morning only to find it snowing heavily. Fortunately it was a fleeting thing. Though the clouds and the occasional flurry slowed things



down, the event was a bustling demonstration of skiplane do's and don'ts as everyone was learning how to cope with the snow conditions. The organizer, Jeff Welker, gave kudos to Randy Townsend, groomer, for doing a terrific job of keeping the runway groomed.

Snow Much Fun!

Continued on page 22

Photos courtesy of Santiago Guericabeitia



Cockpit Conversation

Threat and Error Management



Lessons and Confessions of a Professional Pilot

By Cade Preston,
ITD Division of
Aeronautics

An entire college course could be developed and taught on the subject of Threat and Error Management (TEM). Perhaps it could be a doctoral dissertation. The course would be full of theory, statistics, and human factors. You know, the stuff that makes many pilots mentally wander off into a daydream. The personality of most pilots is pretty practical. We prefer to talk about the absolutes of flying, rather than abstracts. So the challenge is making TEM a practical tool for everyday use, instead of something we theorize about. Today's airline pilots are taught TEM, and are employed with the tools required to mitigate and manage threats and errors. In this article, I will talk about a very practical way of employing TEM for every flight you make. But first, yes, we start with some theory.

Threats are defined as events or errors that occur outside the influence of the pilot. Threats increase the operational complexity of a flight, and require the immediate attention and management by the pilot, for safety margins to be maintained. Threats can be classified as operational or latent. Examples of operational threats are poor runway conditions, adverse weather, or heavy traffic in the vicinity of a backcountry fly-in. Latent threats are insidious — difficult for the pilot to recognize.

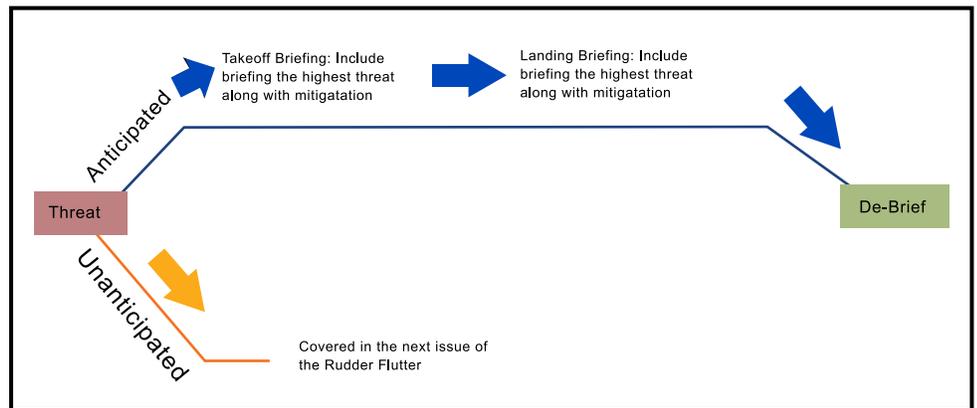
Examples of latent threats are complacency, fatigue, or lack of proficiency.

Errors are defined as pilot actions or inactions that lead to a deviation from intentions or expectations. Errors reduce safety margins and increase the probability of adverse events. Unmanaged or mismanaged errors can lead to an undesired aircraft state (e.g., off altitude, off airspeed, off

TEM is the process that a pilot uses to proactively identify and manage threats and errors before they impact the safety of flight. By implementing TEM, a pilot can successfully mitigate threats, stop errors, and keep the aircraft from an undesired aircraft state.

TEAM

I promised you a practical tool for dealing with threats and errors.



TEAM- Threat & Error Application Model

course, or being in the wrong place at the wrong time).

The three main types of errors are decision errors (skipping a preflight inspection), skill-based errors (ground looping a tail-wheel aircraft due to improper control inputs), and perceptual errors (misunderstanding a taxi clearance.) Errors can never be fully eliminated. Error management is the process of understanding that errors will occur; emphasis is placed on the pilot's vigilance, effective monitoring, and cross-checking, so that errors are identified or stopped in a timely manner and then corrected with an appropriate mitigation strategy.

That tool is called the Threat and Error Application Model, or TEAM. (See figure above). This TEAM model divides all threats into two categories: Anticipated and Unanticipated. In this edition of the Rudder Flutter, we will address Anticipated Threats. Unanticipated threats will be addressed in our next edition.

The goal of the TEAM model is to reduce the severity of the highest threat. Please note that the model does NOT eliminate the threat, but by being aware of it you may reduce the severity of the threat. Most of the time, the threats identified with this model are operational threats. By their nature, latent threats are more difficult to identify. But by taking the time to think about threats, you increase your chances of identifying a latent threat before it sneaks up on you.

Worried? Aircraft late?

Call Idaho State Communications: 208-846-7600 or 800-632-8000



Anticipated threats – studies show that the greatest number of threats is encountered between start-up and top-of-climb, and again from top-of-descent to engine shutdown. The TEAM model requires that prior to engine start, the pilot identifies the highest threat to taxi, takeoff, and climb. After identifying the highest threat, the pilot develops a mitigation strategy. The process is repeated during cruise flight prior to top-of-descent, for descent, landing, and taxi-in.

I cannot emphasize enough the importance of the mitigation strategy. This is an important step that must not be overlooked! If you don't mitigate the threat, you have not reduced its severity! Reducing the severity of the threat is the goal of the TEAM model.

Keep in mind, the highest threat refers to a threat that you identify as being the most hazardous. It is possible that the actual highest threat may be a latent threat that goes unnoticed. Also, on beautiful,

clear, calm days, finding a threat may be difficult. These are the times that latent threats can be at their highest. On such a day, you may want to identify complacency as your highest threat, and develop a strategy to mitigate it. The following are examples of highest threats, along with a mitigation strategy for each.

Departure Threat #1

Threat: departing from an unfamiliar, complex airport.

Mitigation Strategy: continually display the airport diagram on iPad and reference it often.

Sample Briefing: "My biggest threat is I am at an unfamiliar, complex airport. To mitigate that, I will keep the airport diagram displayed on my iPad for my continual reference. Also, I will ask ATC for clarification of any confusing taxi instructions."

Arrival Threat #1

Threat: gusty winds at the arrival airport.

Mitigation strategy: use partial flaps, and add half of the gust factor to my final approach speed. Be ready to go around.

Arrival Sample Briefing: "The biggest

threat is the 15-knot gust factor. To mitigate it, I will add eight knots to my final approach speed. I will also be ready to go around.

That's it! Easy! Remember this is practical, not a long, drawn-out, burdensome exercise. You just identify a threat you think is the highest, and come up with a mitigation strategy. Threats are always present. By identifying one threat and mitigating it, you have separated it out from the others, emphasized its importance, and reduced its severity. Also, since flying is a dynamic activity, conditions are ever-changing. If during your flight you notice a new threat, use the TEAM model and mitigate it.

There is one more step in the TEAM model; the debrief. For anticipated threats, this is a chance to evaluate the threats you

Cockpit Conversation

Continued on page 22

AutoGYRO

Glass Cockpit Aviation is now the authorized dealer for AutoGyro aircraft in the northwest. Call today to schedule an introductory flight lesson.

AutoGyro Sales, Service, and Flight Training

Glass Cockpit AVIATION .com

Boise Airport
3653 Rickenbacker St. #202
Boise, ID 83705
208-869-6459
info@glasscockpitaviation.com

German Design Award
WINNER 2014



We Need to Be Better

**John McKenna, President,
Recreational Aviation Foundation**

As I jog the trails around my Bozeman home I notice the airline departures that leave the area in those first hours of the day. As you can imagine, I am always looking up when they pass overhead. I often wonder where all those folks are going and why they are leaving such a nice place.

Recreational flying is like that. As some depart, others are arriving, trading places with us, using the campsites we leave behind, seeing some of what filled our windshield views and also snapping some digital photos to show the folks back home what they missed.

I think about sharing a good deal. We are generally brief visitors to these

special places so how about *Leaving It Better Than We Found It?* This applies to the campsite we use, the airstrip that we land on and the impression we make on the non-aviation users around us.

Those of us in the aviation world have a unique opportunity to do so much better than others. Beginning with the fact that when we access the backcountry, we leave no tracks coming or going. Our liaison Mark Spencer puts it like this, "We truly are the only mode that needs no road."

We have to work hard to learn the skills necessary to depart terra firma and then safely return. I suspect we all recall being proud to tell our family and friends that we had mastered this flying thing. We continued to learn new things and got better at the old ones. We had to learn a whole new set

of rules, both those that Sir Isaac Newtown taught us, and a few the FAA added in. Along the way we had to continue to be somewhat healthy and oh yeah, work a little harder than many of our friends to pay for our chosen avocation. In short, we just had to be better than the average population just to maintain our love of flying.

It is to that end that I think we have to look at the backcountry. We just simply have to be better than the others that are there. We need to leave the place better than we found it. When we do that, it is easier for all of us to continue to advocate for more spots to go to; and assure continued use of the existing places we enjoy. Let's make our activity be the high bar that others are judged by.

- John

T-Craft Aero Club

Putting Wings on Your Dreams



1975 Cessna 182P \$114/hr



1976 Cessna 182Q \$114/hr
IFR



1965 Cessna 182H \$111/hr

Why join? Better to ask yourself, why not join?

- Seven Aircraft and Hangar owned by the club members at KMAN.
- Low buy-in: \$500 Class I (all except C182's), \$800 Class II. Dues \$70/mo.
- Aeronca Champ LSA – Economical Tailwheel and Sport Pilot training/flying.
 - Expertly maintained at KMAN by Aero Services.
- Low hourly rates. All club aircraft and members are fully insured.
- No minimum daily rates or overnight fees. Reasonable backcountry policy.
 - Safety is highest priority: Monthly safety articles, safety meetings, and minimum monthly flight requirement.
 - 15 seasoned flight instructors offering all levels of training.
 - New students are always welcome at the most economical rates.
- Its a fun, friendly club! That means social events like fly-ins, plane washes, Poker Runs, BBQs, and more.



1974 Cessna 172M \$75/hr



1974 Cessna 172M \$77/hr
IFR



1978 Cessna 152 \$55/hr



1946 Aeronca 7AC \$50/hr

Contact information:
 President: Ben Brandt:
 (208) 867-6718
 Membership: Jim Hudson
 (208) 863-4835
 Or
 Visit: www.t-craft.org



Spring Fever's Boost to Mindful Aviation

By Christina Tindle, M.A.

Spring fever is no longer just about romance, new growth, and summer sunshine. Research in neuroscience, contemplative studies, and positive psychology indicate that learning accelerates during spring from naturally-primed learning centers in the brain. This is great news when scrubbing off aviating-skill-decay from winter's long nap. Skills erode quickly, especially mental proficiency. Dull techniques result in erratic execution of maneuvers and unpolished recoveries. Anything that can restore proficiency sooner is welcomed. While the urgency for fun flying builds, your brain is also biologically eager to achieve those goals.

Abundant hormones and neurotransmitters released into your body each spring light up the brain's learning centers. According to neuroscientists, this means the brain is optimized for learning. When you perform well, you feel good and trigger-happy hormones flood your brain, reinforcing what was just learned. It burns it into your brain deeply. The pleasure centers in the brain hunger for more. It's sort of like being unable to eat one potato chip; you simply want more to reach a satiated state. Priming a happy-based learning curve is key to maximum learning, rapid gain in skill expertise, and maintaining high motivation. Happy brains offer 19

percent greater problem-solving accuracy too, which is valuable during high-stress cockpit situations.

You'll notice the need for less sleep from lowered melatonin levels. That means more available time to fly, which builds expertise from practice alone. More daylight hours and less sleep triggers an increase in vitamin D, which promotes health in many ways so you feel better, stronger, and alert. Confidence in health makes you happier. Known as the happiness hormone, dopamine is spring's most important

Spring Fever

Continued on page 21

HANGARS!

45 Years of Manufacturing Excellence

Buy Factory Direct !



Call Today !

R & M STEEL COMPANY



R & M Steel Co.

Phone: 1-208-454-1800

Fax: 1-208-454-1801

- T-Hangars
- Individual Hangars
- Maintenance Hangars

- Electric Bi-Fold Doors
- Corporate Hangars
- Hangar Homes

www.rmsteel.com

Email: sales.rmsteel@gmail.com



Aviation Medical Matters

Keep your Eyes on the Skies

By: Paul Collins, MD, AME and
Mike Weiss, MD, MPH, AME, CFII



When we take to the skies this spring, we are likely to be sharing them with some of the more than 100,000 UAV's that were among the most popular gifts this Christmas. Even if the new owners register with the FAA, as required, read the manual, watch the instructional cd, and follow the regulations regarding where and how to fly their new toys, you can bet they won't be announcing their position or intentions on 122.9. Maybe it wouldn't

be a bad idea to require drone pilots to have and use a hand held- but it would cost about \$200 per pilot and we know the FAA hates to require expensive avionics. "See and avoid" is likely to be the only tool the pilot has to avoid damage or death. A review of Pilot Vision seems timely.

Most pilots know that the eye consists of a lens that focuses an image on the retina, the light sensitive membrane at the back of the eyeball. The image is converted into electrical impulses conducted by the optic nerves to the optic cortex, part of the brain under the back of the skull. It is there that the image is interpreted and information relayed to other parts of the brain. The lens is pliable and somewhat adjustable by the small muscles of the iris, which also adjust the size of the pupil for different light levels.

The area where the optic nerve connects to the retina is called the optic disk, because it looks like a slightly raised disk when looking through the lens with a special instrument, called an ophthalmoscope. It is not sensitive to light and is a blind spot. Also, there are two kinds of light sensitive cells in the retina called cones and rods. The cones are sensitive to color; the rods are sensitive to shades of gray. The cones work best in bright light, and give sharper vision. They are concentrated more in the center of the retina, with the point of highest concentration, called the fovea. However, the rods work better in low light and are critical for night vision. They are concentrated more to the periphery of the retina. This difference also causes a night "blind spot" of about 5-10 degrees in the center of the

Regal Aviation Insurance

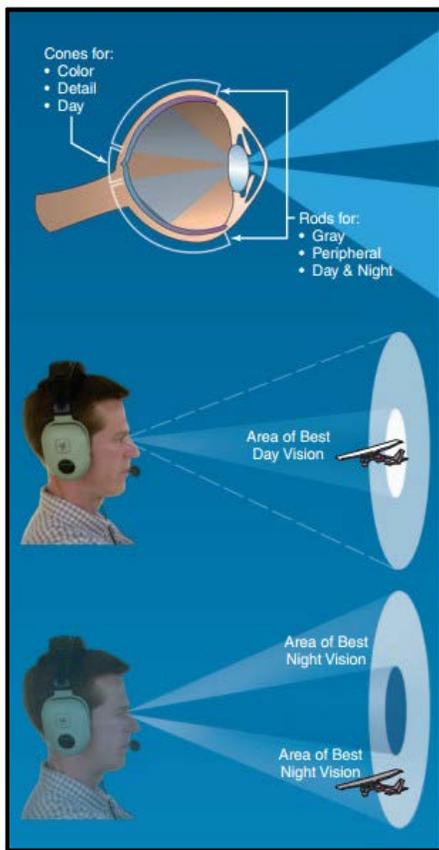


Dedicated to General Aviation

- AG Operators
- Aviation Property (Hangars)
- Corporate & Charter Operators
- Flight Schools
- Fuel Providers
- Maintenance Shops
- Personal Aircraft
- Products Liability

www.RegalAviation.com ▪ 800-275-7345





Rods and Cones

field of vision. For all of the above reasons, while flying, it is very important to scan, that is, move the focus of your vision, left to right and up and down. This should be done a few degrees at a time, pausing to allow your eyes to focus. (See below)

We may use glasses to help focus or sun glasses to help vision in bright sunlight. It is a good idea to carry at least one extra pair of glasses, making sure the lenses aren't scratched and the prescription is up-to-date. That means a visit to an optometrist within the past year, especially if you are over the age of 50, since vision tends to worsen with age. If you use contact lenses, remember that they are only allowed for distant vision and wearing one lens for near vision and one for distant vision is not allowed for flying. If you do use contact lenses, carry a pair of glasses as a back-up in case a lens comes out during flight. Commercial licenses and above require correction to at least 20/20 in each eye. Third class only requires correction to 20/40. With the new environment we are facing, this may be a case where just because it

is legal, doesn't mean it is safe. It is also not a bad idea to carry a small pair of binoculars in your flight bag.

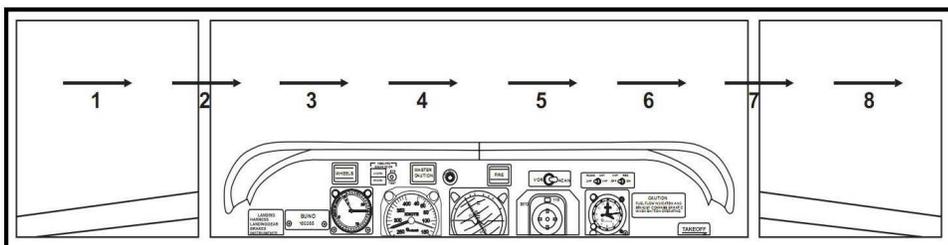
The normal field of vision for each eye (what we can see without moving our eyes or our head) is 60 degrees up, 75 degrees down, 100 degrees to the side and 60 degrees to the middle (nose side). The test of visual fields done by the AME for any class of medical certification is by confrontation, that is, sitting or standing opposite the pilot with their eyes fixed on the examiner and testing their ability to see up, down and to the sides. Failure requires further evaluation by an ophthalmologist. This is a good screening for the many possible causes of decreased fields of vision. These include increased pressure in the eyeball, called glaucoma, cataracts (clouding of the lens) or damage to the retina from degeneration or circulation problems. Once these are treated and stable, it is highly likely the pilot can be certified. Even if a pilot only has one eye, a medical certificate of any class can be obtained once 6 months has passed to allow for adaptation to monovision. Certification from an eye specialist is needed to verify that they have no significant eye disease in the remaining eye, they can be corrected to 20/20 vision with a reasonable lens (FAA specifies 3.5 diopters- which is a measure of the curvature of the lens), and they pass a Medical Flight Test from the FAA. Even a normal visual field with two eyes is limited. This means that in addition to scanning, the pilot needs to move their neck to see as much as possible outside of the cockpit. It also doesn't hurt to use any additional eyes in the plane, whether pilot or passenger. Even normal eyes vary in their focus. We normally switch between focusing

inside on instruments and charts to outside of the cockpit. As we tire our eyes fatigue, especially if we spend long hours at work in front of a computer screen, (remember the lens is adjusted by muscles) and we will not adjust as quickly between near, intermediate and distant focus. Symptoms of this include blurred vision, excessive tearing, heavy eyelids, aching of the forehead or eyes, burning, dry eyes or scratchy eye sensations. If there is not a distant object to focus on, the eyes tend to focus at a relaxed, intermediate distance of 10-30 foot. This requires conscious focusing on a distant object before scanning. This is worse when flying over water, in haze or between cloud layers, especially at night.

Speaking of night flying, it is important to remember that it takes 30-45 minutes to fully adapt to minimal lighting conditions. To minimize the time needed for your eyes to adjust, be sure to use the minimal amount of cockpit lighting (including the brightness of any electronic gadgets you may use). Avoid bright lights for an hour or so before flying, avoid inhaling carbon monoxide (i.e. don't smoke, especially before going for a flight, and be wary of exhaust fumes on the ramp or in the hangar), get enough Vitamin A in your diet (sweet potatoes, carrots, dark leafy greens, bell peppers, cantaloupe, apricots, fish, liver and tropical fruits), and use supplemental oxygen when flying at night above 5000 ft. MSL, and lower if you smoke or have any lung disease. A useful addition to your flight bag might be a battery powered oximeter, a gadget that clips onto a finger to measure the percent of

Eyes on the Skies

Continued on page 21



Side to side



Training Essentials for Mountain Flying Safety

By NTSB (SA-039 March 2015)

The problem

- Pilots with limited or no training in mountain flying can be surprised about their aircraft's different performance at high density altitude, often leading to serious or fatal accidents.
- Wind and other weather phenomena interacting with mountainous terrain often lead unsuspecting pilots into situations that are beyond their capabilities.
- Should a crash occur, a pilot who survives the crash but does not have emergency or survival gear immediately accessible may not survive the harsh environment until rescuers are able to reach the location.

Related accidents

The NTSB has investigated numerous accidents in which limited or no training resulted in accidents in mountainous terrain.

- A pilot and two passengers of a Piper Cherokee 235 were fatally injured when trying to follow an interstate highway over a high mountain pass. Employees of the fixed base operator (FBO) at the departure airport reported that the pilot had asked about routes across the mountains. Based on the conditions at the time of the accident, the airplane's climb rate would have been reduced by more than 90 percent. It is likely that, as the pilot attempted to cross over the mountainous terrain near the pass, he raised the airplane's nose to the point that he exceeded the airplane's critical angle of attack. With the airplane's decreased performance, this led to an aerodynamic stall and loss of control. (CEN14FA328)

- A private pilot and three passengers of a Mooney M20E were fatally injured during takeoff in gusty wind conditions from an airport located at an elevation of 8,380 feet. The pilot had no prior experience flying out of the accident airport and limited experience flying in mountainous terrain. Witnesses reported that the pilot seemed confident about his ability to fly the airplane and he was not concerned with the wind conditions. As the airplane departed, the reported wind was 33 knots, gusting to 47 knots. Later review of weather data showed mountain wave activity in the area. After the airplane lifted from the runway, it crabbed into the wind, and then rose and fell repeatedly as its wings rocked, before coming to rest inverted. (CEN13FA183)

- The pilot and two passengers of a Cessna U206G were fatally injured and two passengers sustained serious injuries when the airplane collided with mountainous terrain. The pilot was transporting the passengers to a remote back country airstrip. As the airplane proceeded on the flight, ridgetops on both sides of the valley became obscured with an overcast cloud layer at 7,000 feet, and ragged clouds with mist were probably present beneath the overcast. Local pilots reported that in these types of weather conditions, numerous drainages can be similar in appearance. Radar data showed that the airplane was well short of the position reported by the pilot. Because of this, the pilot misidentified the drainage he intended to reach and instead turned into a drainage that ended in a box canyon. After impact, all communication, survival, and

foul-weather gear aboard the airplane were destroyed in a post impact fire. Although the pilot's logbook indicated that the pilot had 2,723 hours total flight time, it showed minimal back country or mountain flying experience. (SEA04GA192)

What can pilots and flight instructors do?

Through training, pilots can develop skills and techniques that will allow them to safely fly in mountainous terrain. When planning flights in mountainous terrain, pilots and flight instructors should do the following to enhance safety.

- Flight instructors should encourage their students to attend a quality mountain flying course before attempting flight in mountainous terrain or at high density altitudes.
- Pilots should consult with local flight instructors before planning a flight into mountainous terrain. Even experienced mountain pilots may not be familiar with local conditions and procedures for safe operations.
- Pilots should be aware that weather interacting with mountainous terrain can cause dangerous wind, severe turbulence, and other conditions that may be unsafe for aircraft, especially light GA aircraft.
- Pilots should consider specialized emergency and survival equipment (such as personal locator beacons in addition to a 406 emergency locator transmitter) before flying in

**Mountain
Flying Safety**

Continued on page 22



Radio Chatter

By Tammy Schoen, Editor

Electronic Rudder Flutter Available

In the interest of saving a few trees, Aeronautics is offering the Rudder Flutter electronically. If you would like to switch from the printed version to an electronic version, please contact our office at 208-334-8775 and let us know. You could also email tammy.schoen@itd.idaho.gov with the subject line E-Rudder Flutter.

Like Us on Facebook

Aeronautics now has a Facebook page! We are posting interesting articles and photos, upcoming events and sharing information important to the flying community. Search for Idaho Division of Aeronautics and give us a like!

We are seeking nice photos we can use on the cover of the page. If you would like to submit something, please either post it to the page or email it to tammy.schoen@itd.idaho.gov with the information on where the photo is taken and who gets photo credit. You can also send information you would like us to share.

Goodbye Old Friend

Former Division of Aeronautics Administrator Worthie Rauscher passed away on April 19th in Coeur d'Alene. Worthie was born in Stanford, Montana in 1928. After a career in the Air Force as a fixed-wing and National Guard rotor-wing pilot, he served as the Administrator of the Division from 1971 to 1987. Worthie spent his

entire adult life involved in all aspects of aviation and had an impact in airport development in both his home state of Montana and in Idaho.



American Airlines to Begin Nonstop Service to Dallas

Boise, Idaho – American Airlines has announced they will begin service from Boise to Dallas/Fort

Worth International Airport beginning this June. With the addition of Dallas, the Boise Airport now has nonstop service to 20 destinations across the nation.

“As our city grows and prospers, the Boise Airport continues to build essential connections to cities all across the country,” said Boise Mayor David Bieter. “This nonstop flight to Dallas provides local residents and businesses with yet another connection to an important commercial and transportation hub, and deepens the Boise Airport's contribution to our city and economy.”

The daily flight will be operated by American Airlines using a 148 seat Airbus A319 aircraft.

Correction

In the Annual ACE Academy article, page 10 from the Fall, 2015 issue, it said that Steve Edgar is a B747 Captain and he is a B737 Captain. He was also a USAF Operational Test and Evaluation pilot who worked with pure test folks from Lockheed and the USAF while on active duty, he was not a Lockheed test pilot. We apologize for the incorrect information.

**YOUR GOALS
YOUR REALITY**

Celebrating **26** Years!

→ Aviation Planning
→ Airport & Heliport Design
→ Construction Administration
→ Airport Management Consulting Services

T-O ENGINEERS

Boise | Coeur d'Alene | Nampa

www.TO-Engineers.com

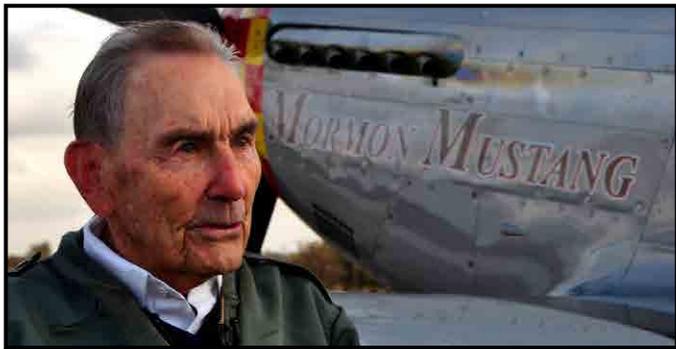


Passion and Patriotism The Legacy Air Museum

By Liza Bagley and
Jaclyn Bagley Brunson

Bob Hoover once said the reason he wanted to go to Europe during World War II was, "Patriotism, the love of flying and adventure." Those exact words explain why John Bagley wanted to build The Legacy Air Museum in Rexburg, Idaho.

Bagley was born with the spirit of adventure. His love of flying began early in life when neither his skis nor



General Wright by the Mormon Mustang

his Honda motorcycle provided the speed he craved. He took to the skies in high school and found the high octane he so desperately sought. His patriotism was a natural outgrowth and he began flying, collecting and refurbishing WWII planes.

The Legacy Flight Museum opened in 2006 with two goals: to provide visitors an opportunity to see some of the planes that served our country, and to honor the men and women who gave their freedom so that we could enjoy ours, many gave everything.

"If it weren't for these men and women, we would all be speaking German." Bagley said, "We owe them everything, we honor them and remember them as true heroes."

Biannually, The Legacy Flight Museum commemorates Father's Day with a

fantastic array of planes in the air above Rexburg. These include Bob Hoover's legendary P-51 Mustang "Ole Yeller," a Beechcraft Staggerwing, a North American T-6 Texan, and a 1947 U.S. Air Force Bird Dog, to name a few. Talented pilots such as Greg Poe, Kent Pietsch, Todd Therp, Bagley and his son Shawn have presented performed flight demonstrations worthy of the admiration of Bob Hoover himself. All the WWII planes are maintained airworthy and in show condition.

American Mustangs destroyed 4,950 enemy aircraft in Europe to make them the most effective U.S. fighter planes in the WWII theatre. With the

Rolls Royce Merlin engine, the Mustang was the most agile and maneuverable plane of its day, the crème de la crème. Of the 14,819 Mustangs that were built, only 150 (roughly one percent) are still flying today. The Legacy Flight Museum has three air worthy Mustangs on display.

Ole Yeller

With its definitive yellow and green color scheme, Ole Yeller is likely the most identifiable and memorable of the P-51s. Owned and flown by Bob Hoover in more than 1,000 air shows in the United States, Canada and Mexico, it stills holds the prop plane speed record from Los Angeles, Calif. to Daytona Beach, Fl. -- 5 hours and 20 minutes- established on March 29, 1985. The plane also flew numerous times at the Reno Air Races. When this plane was bought from Hoover, it

was with the promise that the paint colors would remain the same.

Mormon Mustang

During WWII, Roland Wright flew three different P-51s, all carrying the name "Mormon Mustang" on the fuselage. None of those planes returned from Europe. In honor of Wright, one more P-51 proudly bears the name "Mormon Mustang" and calls Rexburg its home.

On a fall morning in 2009, the "Mormon Mustang" took to the skies with Brigadier General Wright, then 90 years old, on board. "It's just exciting for me at my age. You never think you'll get a chance to do something like this again. I feel at home in this plane. This was the ultimate aircraft of that era. It made it possible to liberate Europe."

With more than 2,000 hours logged in a P-51, General Wright was able to log one more.

Section 8

The third Mustang is Section 8. It has been restored to full V-day markings and display guns. Do you know what Section 8 means...getting a section 8 meant you were crazy and had to be discharged from the Army. Klinger from the television show M*A*S*H was always trying to get a Section 8.

P-63 King Cobra

One of the rarest aircraft still flying, a P-63 King Cobra, resides inside the museum. Built around a 37mm canon in 1944, only 3,300 of these aircraft were built. Most (approximately 2,400) were sent to the Soviets in the Lend-Lease Program and the Soviets used them to





The Stars and Stripes are an appropriate backdrop to these WWII planes

great effect against the Germans as “tank busters.” The few that were left in the United States were used as trainers. Fitted with sensors, the P-63 became “Flying Pinballs” and bomber gunners. Frangible .50 caliber bullets made them flying, armored targets.

Our King Cobra was rebuilt by astronaut Frank Borman and is one of only two flying P-63s in the world today.

Bird Dogs

The Legacy Flight Museum has several different Bird Dogs. One has been outfitted with skis and another is painted grey and outfitted with “Willie Pete” target-marking rockets, as used during Vietnam. The Bird Dog was used as an observation plane. With 60 degrees of flaps it can take off and land just about anywhere and with its observation panels, the pilot has a 360-degree view.

Staggerwing

The Legacy Flight Museum’s Staggerwing was built around 1933. Its original use was that of an executive transport -- the ‘30s version of modern day business jets. Many were modified and

used with great success as air racers. By WWII, the military drafted many Staggerwings, including ours, as personnel transports for both the Army and the Navy. Interestingly, China used the planes as air ambulances in their fight against Japan. After the war, our Staggerwing was used as a business plane for the Daisy air rifle company before eventually finding its way to John Bagley in Idaho.

To fill in more of the story of our service men, the museum houses a variety of memorabilia. The museum also contains military uniforms and accoutrements from the Civil War through modern times. Throughout the museum are working WWII Jeeps and trucks brought out during parades and air shows.

The museum is a wonderful addition to Rexburg, and most importantly, a tribute to WWII veterans who gave so much. It is vital that the younger generations appreciate those who

served and continue to serve to preserve our freedoms in the United States of America.

The museum is open six days a week from Memorial Day through Labor Day from 9-5 with limited hours during the winter. See the website for specifics: <http://www.legacyflightmuseum.com/Default.aspx>.

Special group tours are available after hours by calling 208-359-5905 or 208-351-0100.

The next Legacy Air Show will be held the Saturday before Father’s Day in 2016 (June 18). The focus will be on warbirds.



Three Mustangs in flight - Taken from Bob Hoover’s Old Yeller



The Unmanned Aircraft Systems Maze



By **Santiago Guerricabeitia**,
ITD Division of Aeronautics

There seems to be a lot of confusion about the flying of

Unmanned Aircraft Systems (UAS).

The FAA has determined that UAS are aircraft, not toys, subject to aviation rules and guidelines. Last December, the federal government passed a set of regulations governing these devices in anticipation of

approximately 700,000 units being given as gifts.

Until new FAR's come out, here is how they currently apply for private, non commercial use:

- Your UAS must be registered if it weighs between .55 and 55 pounds (including all accessories and payload).
- Those who purchased their UAS prior to December 21, 2015 had until February 19 to register.
- Those who obtained their UAS after that date will have to register prior to their first flight.
- You must be at least 13 years old to register; otherwise a parent will need

to do it. Be advised, the parent will be responsible for the use of said UAS!

- The cost to register is \$5 and is good for three years. A certificate is issued with a unique ID, which is to be affixed to all UAS the registrant owns that require registration. The certificate must be in your possession when operating the UAS. One registration covers all your UAS.
- The purpose of registration is to integrate and educate the public on what is allowed under the current airspace system, at the core of which is accountability. The e-mail address submitted allows a point of contact for any regulatory changes or



Bill White Insurance

Aviation Insurance Geniuses



Speak to a real person 800.666.4359
Get a quick quote online bwhiteinsurance.com



information to be distributed. When registering, you will be asked to agree to,

- 1) Not fly above 400 AGL and remain clear of obstacles.
- 2) Keep the UAS within visual line of sight at all times.
- 3) Remain clear of and not interfere with manned aircraft operations.
- 4) Not fly within five miles of an airport unless you contact the airport.
- 5) Not fly near people or stadiums.
- 6) Not fly a UAS that weighs more than 55 pounds.
- 7) Not be careless or reckless with your UAS.

There is a free app (imagine that) for UAS that can tell you of airspace restrictions called B4UFLY.

If you do anything with the UAS that earns income, you are a commercial

operator and beyond the scope of this article. More rules and in-depth registration will now apply to the operation of your UAS.

Now let's open a can of worms. If you fly out of your back yard and over somebody else's, are such operations legal? There are cases in court right now dealing with this very question. Even if you have a small (<.55 pounds) UAS, the rules still apply, but registration is not required.

It is unfortunate that this segment of flying must be regulated, but increasing "close calls" and the security gaps (such as airports, nuclear plants, jails) have made regulation a must.

The path through this maze is not yet clear. Fortunately, we have a vast amount of airspace in Idaho available to fly your UAS. So don't be shy and enjoy the fun they were designed for. I surely do enjoy flying mine.

To Be Continued...

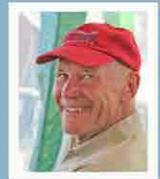


Santiago and his UAS at Ace Academy

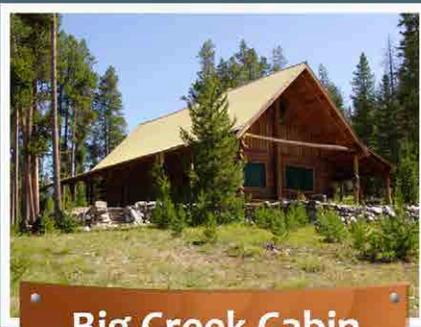
the **McCall**
Real Estate Company

Michael Anderson
Broker | Owner
208.634.6821

michael.anderson@mccallrealestate.com



Stunning Big Creek Cabin and McCall Airport Hangars NOW AVAILABLE!



Big Creek Cabin

\$495,000

Log cabin on 4.5 acres with spectacular views - just a short walk from Big Creek airport!



Hangars Available

McCall Airport

A variety of hangars at McCall Municipal Airport priced from \$129,000 to \$599,000. Widths from 42' to 70' with door opening heights from 12' to 18'. Suitable for everything from Cubs to business jets.



Hangars Available

McCall Airport

The McCall Real Estate Company | 301 East Lake Street | McCall, ID 83638 | www.McCallRealEstate.com



Calendar of Events

ONGOING EVENTS

Kilroy Coffee Klatch: First Tuesday of every month: 10 AM Warhawk Air Museum hosts WWII generational people for a morning of conversation and friendship. All veterans are welcome. www.warhawkairmuseum.org, 208-465-6446

June 2016

- 3-5 **Garden Valley Fly-in** (U88), Top Fun Flyers. 20 planes/30 people. Don Ryals, 860-3650
- 4 **Thomas Creek work party** (2U8) - IAA Jerry Terlisner, 208-859-7959
- 10-11 **Garden Valley Fly-in** (U88), T-Craft Aero Club. 10 planes/35 people
- 11 **Chamberlain Basin work party** (2U8) - IAA Jerry Terlisner, 208-859-7959
- 13-15 **ACE Academy** - 25th Anniversary! Introduction to Aeronautics careers for students ages 14-18. Classroom, tours, flights and fun! Tammy Schoen, 208-334-8776 or tammy.schoen@itd.idaho.gov
- 16-19 **Johnson Creek Fly-in** (U88), NBAW. 80 planes/200 people. Wendy Lessig, wendylessig@hotmail.com
- 18 **Breakfast at Big Creek** (U60), See the exterior of the beautiful new lodge! Pancakes, eggs and ham plus coffee and juice for \$10/plate. Larry Taylor, 208-484-2153
- 18 **Legacy Flight Museum airshow**, Rexburg (RXE). 10AM - 4 PM. FREE to the public. Aerobatics, warbird flyby's and displays, guest speakers and WW2 military vehicles and displays. Legacy Flight Museum, 208-359-5905 or legacyflightmuseum@yahoo.com
- 18-19 **Father's Day Fly-in**, Garden Valley (U88). Potluck dinner on the 18th, breakfast 19th. Jerry Terlisner, 208-859-7959, jtflys@q.com
- 21-23 **Wilderness Within Reach** - A program that provides free air transportation and lodging at Sulphur Creek Ranch (ID74) in the Idaho backcountry for those who cannot physically or economically access these remote areas. It is sponsored by the Idaho Aviation Foundation and supported by pilots and air charter companies. Joe Corlett, 208-890-1819 or jcorlett@appraiseidaho.com
- 23-26 **9th Annual GlaStar/Sportsman Fly-in**, Smiley Creek (U87) 25 planes/50 people Dave Hulse, 916-705-6777, 646dg@sbcglobal.net

June Continued

- 24-26 **180/185 Club**, Garden Valley (U88). 40 planes/80 people. Jim Davies, 208-859-5537, jdavies@idahoflyer.com
- 25 **Round Engine Roundup**, Smiley Creek (U87). 25 planes/75 people Tom Hoff, 208-587-1202, info@aeromark.com
- 25 **Orogrande work party**, Mike Vanderpas, 208-983-9583, mvanderpas@fs.fed.us
- 25 **Breakfast at Big Creek** (U60), See the exterior of the beautiful new lodge! Pancakes, eggs and ham plus coffee and juice for \$10/plate. Larry Taylor, 208-484-2153

July 2016

- 15-17 **180/185 Club**, Johnson Creek (3U2). 40 planes/100 people Mike Perkins, mp@reagon.com
- 16 **Fly-in Breakfast**, St. Maries (S72), 8 AM - 11 AM Carol Koelbel, 208-245-2914
- 16 **Breakfast at Big Creek** (U60), See the exterior of the beautiful new lodge! Pancakes, eggs and ham plus coffee and juice for \$10/plate. Larry Taylor, 208-484-2153
- 30 **Kamiah Fly-in**, Kamiah (S73), 8 AM, Breakfast, lunch, auction, flying competition and Young Eagles flights for kids. Ron Funnemark, mrfunn1@gmail.com

August 2016

- 6-7 **Flight Instructor Refresher Clinic**, Hotel Riverside, 2900 Chinden Blvd, Boise. Day 1 is 8 AM - 5 PM and Day 2 is 8:30 AM - 5 PM \$189 Register at sign-up.aviationseminars.com click Course Calender.
- 13 **Bronze, Blues and Brews event fly-in Breakfast**, Joseph Airport, hosted by Wallowa Pilot's Association. Bill Ables, 541-263-1327
- 13 **11th Annual Wings over Sandpoint fly-in**, Sandpoint (SZT). Best breakfast in the Northwest! 8 AM to 1 PM. Jan Lee, 208-255-9954
- 20 **Timber Basin Airpark, Inc. Fly-in**, Sagle (ID24) 7 AM - 11 AM
- 27-28 **Warbird Roundup**, Keep checking the website for further information contact Warhawk Air Museum, 208-465-6446 or www.warhawkairmuseum.org



Summer Getaway

Continued from page 1

water, rough water, and confined areas. Other skills you'll learn are how to "sail" backward to shore using the wind, beaching, securing, and docking. When your instructor feels that you're ready, you'll be

profiles for this difficult emergency are ingrained forever.

With any new skill, especially something like flying — where you are performing multiple physical and mental tasks at once, plus dealing with the outside environment and a plane that weighs well over 1,000 pounds — there can be times where you might feel like you're trying to drink from a fire



Photo Courtesy of Alaska Float Ratings

recommended for your check ride with the Designated Pilot Examiner. My favorite training exercise was the "roller coaster." Take off, and at about 100 feet, the instructor cuts the power completely. You learn just how fast and hard you have to push the stick forward to maintain airspeed. Then the water is rushing up at you, and you have to resist the temptation to flare early and drop the plane. You set it down gently and you power up again and take off. Do this over and over, and the correct motions and sight

hose. It helps enormously to do some work at home before you begin. For instance: learn how to tie proper knots! You will need to demonstrate that you can tie the airplane up to the dock, so, rather than fumbling around under pressure, learn that at home. Here's another tip: before you begin, buy the FAA book *Seaplane, Skiplane, and Float/Ski Equipped Helicopter Operations Handbook*, FAA Publication FAA-H-8083-23. It's widely available, including on Amazon.com as a softcover for less

than \$10, or on Aircraft Spruce.com for \$11.95 hardcover (I'd go with that, personally). This slim volume has all the book learning you need to get your rating. Study this and you'll be way ahead before you even begin your first lesson.

Another great resource is the Seaplane Pilots Association, www.Seaplanes.org, whose slogan is "Putting the Adventure Back in Aviation!" That just about says it all.

So if you decide to go for it, which flight school should you choose? You may have to travel a bit to get to a seaplane flight school. Want a real adventure, and mountain-flying instruction thrown in with your seaplane rating? Then head to Alaska, where float flying is a way of life. I got my rating at Alaska Float Ratings, www.AlaskaFloatRatings.com.

The *Rudder Flutter* is published by the Idaho Division of Aeronautics. Articles appearing in this publication are the opinion of the writer and do not necessarily represent the views of the Staff, the Administrator, or the Department. All reasonable attempts are made to ensure the accuracy of the articles contained herein. The *Rudder Flutter* is published quarterly. All articles must be submitted to this office for review.



Idaho Transportation Department

Governor C.L. "Butch" Otter
Director Brian Ness
Administrator Mike Pape

Aeronautics Advisory Board

Chairman Rodger Sorensen
Members Colleen Back, Chip Kemper,
Dan Scott, and Mark Sweeney

Division of Aeronautics

3483 Rickenbacker St., Boise, ID 83705

Website: <http://www.itd.idaho.gov>, Ph: 208.334.8775

Rudder Flutter Editor: Tammy Schoen
Email: tammy.schoen@itd.idaho.gov

Assistant Editor: Steve Grant

Graphic Design: Pauline Davis, Jared Tuttle

The Idaho Transportation Department (ITD) is committed to compliance with Title VI of the Civil Rights Act of 1964 and all related regulations and directives. ITD assures that no person shall on the grounds of race, color, national origin, gender, age, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any ITD service, program, or activity. The department also assures that every effort will be made to prevent discrimination through the impacts of its programs, policies, and activities on minority and low-income populations. In addition, the department will take reasonable steps to provide meaningful access to services for persons with Limited English Proficiency.

Backcountry Courtesy

1. Fly to the right side of the canyon;
2. Turn on your landing lights;
3. Monitor 122.9 and make position reports;
4. Announce your intentions while in the traffic pattern and on the ground;
5. Avoid multiple takeoffs and landings;
6. Stay as high as possible except during takeoff and landing (200 feet AGL recommended);
7. Reduce power and RPMs when safety permits;
8. Above all, be safe.



Defining Professionalism in Aviation

By Tana Schneider

On May 25, 1979, American Flight 191 crashed, standing as one of the deadliest aviation accidents in the nation. This all derived from one small issue. Maintenance management failed to fix an unseen crack in the aircraft's engine pylon. The new forklift procedure that caused the crack was designed so they could focus on generating income instead of focusing most of their time on performing maintenance. The integrity line had been crossed, and with a change of procedures, failed to complete an adequate safety analysis. The crack propagated, resulting in a loss of lift on takeoff. The plane crashed resulting in 260 people dead, all because of one small crack.

I join several others in aviation communities who have something in common; we love flying, and we love airplanes. As great as this is, we must step back and examine what makes the aviation system work successfully. It all starts with

maintaining optimum safety through aviation professionalism.

The exact definition of professionalism remains quite vague. Encouraged in all careers, it can cover a broad spectrum of topics. Professionalism in aviation could include everything from compliance with regulations, checklists, and certifications to first impression appearances. A narrowed-down definition of professionalism in aviation derives from a simple, yet profound statement noted by the NTSB as well as the International Association of Flight Training Professionals (IAFTP). It is a perfect explanation of professionalism and success, especially in the aviation community. The NTSB confidently states, "Professionalism is doing the right things, even when no one is watching." This statement is vital in all aspects of life. If competent individuals pursue this goal and persistently strive to be qualified people with high integrity, prosperous careers and meaningful lives will undoubtedly come into view.

True aviation professionals will demonstrate integrity by being meticulous with even the slightest details and remain compliant with laws and regulations. They are honest in all their dealings. The dictionary defines integrity as a "firm adherence to a code of especially moral or artistic values." A professional is someone who has the firm mindset to always pursue the correct path. They do this regardless of required additional work and whether anyone is watching. In our highly competitive world, it is easy to become wrapped up in the dishonesty of so-called "professionals," but it is important to go back to the basics and stand true to morals and values despite the anticipated consequences. Integrity will permanently stand when everything else fails.

One may wonder how to adhere to such a code of values, since integrity is not a written employee handbook, but rather learned through life experiences and upbringings. Each person has a sense of right and wrong. Robert Baron, the president of the Aviation Consulting Group of Flight Safety points out that by the time a person becomes employed, they should have an idea of what is ethically right. However, corporate power can still cause respectable, honest people to cross the line. Professionalism cannot always be closely regulated. The FAA informs the public that professionalism is something they can only "encourage and urge pilots and flight crews to aspire to." Integrity is treated the same way. It can only be an encouraged lifestyle rather than a set checklist. Precise obedience and continuing education is a part of doing what is right and being professional. Michael Buckland, an aviation professor at the University of Alaska says, "It doesn't

MONITOR GUARD FREQUENCY 121.5!

If you hear a distress signal or radio call:

Note your altitude, location and time

and

PASS IT ON . . . IMMEDIATELY!!

- ATC or FSS
- FSS: 800-WXBRIEF (800-992-7433)
- Idaho State Communications (800-632-8000)
- Local FBO
- Local County Sheriff



**Precision
Aviation
Maintenance
is located at
the Magic
Valley
Regional
Airport,
KTWF, in
Twin Falls,
Idaho.**

**Precision Aviation Maintenance, Inc.
Twin Falls, Idaho**



**Aircraft
Maintenance & Repair**

Phone: 208-736-3374
Fax: 208-735-1291
E-mail: mx@paviation.com

Our mechanics have over 40 years of aircraft maintenance experience providing maintenance and repair services for all general aviation aircraft. Our services are offered to the owners and operators of both piston and turbine aircraft. We are a Standard Aero Customer Support Center and a factory install center for Ice-Shield. Call or stop by to meet our staff and schedule your next service or visit our web site at www.paviation.com. 208-736-3374

matter who is right; it matters what is right." This includes a valiant willingness to admit mistakes. It means being humble and going above and beyond general requirements. The honorable John K. Lauber of the NTSB put it well when he said, "there is a fine line separating a relaxed and easy atmosphere in a cockpit from a lax one where distractions can result in critical failures. Professionalism may be described as knowing the difference between the two." Integrity in an aviation community will make the difference between a mediocre career and an outstanding, successful, honorable one. Integrity leads to trust, which is the foundation of a successful aviator, and it all starts with being the example. Respectable professionalism does not come all at once. Like ripples in a pond, it starts with one act of integrity and spreads exponentially. Eventually, others follow suit while trust builds. Long journeys await those who must repair broken trust. Fraudulent

behavior corrupts professionalism. On the other hand, successful, respectable companies demonstrate high quality service and integrity at all times. These are the safest aviators that people trust their lives with.

One small instance like letting a small crack propagate to generate more income can result in devastating consequences and lives lost. It is my hope that despite the world's lax behavior in consistent honesty and integrity, future aviation professionals will raise the bar to a higher standard. Constantly sharpening the saw and living a quality life of integrity will ensure success and a strong foundation of

trust. A professional future will come by being honest and doing the right thing, even when nobody is watching.

AVIATION MEDICINE
(208) 901-4493

**IN JACKSON JET CENTER
AT BOISE AIRPORT**



STEPHEN D. LEONARD, MD, FACS

SENIOR AME - HIMS
ATP, LRJET, CE500, SF.260
SLFLTDOC@GMAIL.COM

3815 WEST RICKENBACKER
SUITE 213
BOISE, IDAHO 83705

Tax & Business Assistance
***Providing a Mile High Level of Personalized
Service.***

Bruce "Sparky" Parker



Parker, Wilkerson, & Nuxoll, CPAs, PLLC
208-321-1323 parkerb@pwncpa.com



Unmanned Aircraft Systems - Drones!

**By Steve Edgaar,
Founder, Empire Unmanned
(formerly ADAVSO President
and CEO)**

The media loves a good controversy, and articles about “Drones” seem to be part of the news mix almost every day. The word Drone is often used when describing military operations of unmanned aircraft where the U.S. (or law enforcement) is either spying on, or targeting, a bad guy. However, the more recent use of unmanned aircraft systems (UAS) to provide a wide range of services from surveys to crop studies has led to a better understanding about unmanned aircraft. What are the differences between a UAS and a drone?



eBee on its way to work

A drone is something you launch – go to bed – and it returns in the morning! A UAS has a human at the controls the entire time it is airborne. A UAS typically follows a preprogrammed route and can be taken over manually or placed into an immediate Return to Base mode in the event of a malfunction. A UAS also has a visual observer crew member that must “clear” the flight path and watch for any hazardous situations. A UAS has FAA classifications, but for now, the only ones approved for operations in the National Airspace System are those in the Small UAS (sUAS) category; those weighing less than 55lbs. The

FAA issued a sUAS Notice of Proposed Rulemaking (NPRM) in Feb 2015. The complete proposal can be found at the following URL:
<https://www.faa.gov/uas/nprm/>. The rulemaking process is still underway and some believe the new rules will be issued in 2016.

In the meantime, the FAA has allowed sUAS operations through a mechanism commonly referred to as a Section 333 Exemption. Essentially the exemption grants a user the ability to fly sUAS for commercial operations; for hire. The exemptions are quite restrictive, but in a nutshell, they define the vehicles by name/manufacture and require a licensed and current pilot (private or sport) be at the controls. Since the process began there have been over 3000 exemptions issued. On 6 January 2015, our Idaho based firm was the 7th in history to receive this authorization.

Having an exemption does not grant you authority to fly! You must also apply for and obtain a Certificate of Authorization (COA) that grants you very specific airspace authority and you must issue a NOTAM every time you fly. This process is very time consuming and cumbersome and, to date, we have applied for and been granted over 54 COAs. Then in March 2015 the FAA issued blanket COAs to all exemption holders for flight operations at, and below, 200’ AGL. We believe this kind of progressive thinking by the FAA will be helpful in making UAS operations more efficient and safer. (See full rules at <https://www.faa.gov/news/updates/?newsId=82245>)

While there is a plethora of UAS operators offering services, in order to legally operate (or hire) a UAS, you need to assure compliance with a multitude of restrictions and obtain written authorization from the FAA. If an operator attempts to sell you drone products, be sure to ask for a copy of the exemption and blanket COA. Equally important is verification of



The eBee UAS is used for aerial mapping

liability and flight insurance. As an aside, our company filed a claim after a UAS was attacked by a Great Northern Hawk. After a lot of chuckles, the insurance company asked to see our UAS pilot records, recent flight time, certification and training of the pilot. Only after they reviewed all the documentation, including our exemptions and COA, did they make payment on our over \$20,000.00 dollar loss.

How does the FAA define for-hire services? In a nut shell, if you gain a commercial/financial advantage then it is not a hobby and considered for-hire. As an example; without an exemption and COA it would be illegal for a farmer to buy a drone, and use the data from his flights to make better production decisions than his neighbor. On the other hand, if the same drone farmer flies over his personal garden used for his own family’s consumption then the flights are considered hobbyist. I only used farming as an example but it could apply to a real estate agency or many other industries as well.

Hopefully the word “drone” and its connotations will be used less in the future and UAS will more accurately describe some of the amazing uses of these complex vehicles.



I want to let you all know that North Idaho College, (NIC) is offering UAS classroom instruction that can be taken online! There are three courses; UAS 101 – History of UAS ; UAS 102 Communications Architecture; and UAS 103 Sensors. In addition to these courses, they also offer an on-line Visual Observer Certificate and also have actual UAS flight operations training. In the interest of full disclosure, our company assisted in the development of these courses and we are working with NIC to add more. NIC is fully invested in aviation and are working hard in their Aviation Materials Center of Excellence and starting a manned flight

program. These folks really get aviation and want to lead the state in aviation education and operations. Check them out at: <http://www.nic.edu/websites/default.aspx?dpt=65&pageId=5880> In closing, I also want you to know that Empire Airlines has a new business – Empire Unmanned (EU) LLC. They specialize in sUAS flight operations and contract with major agriculture and mining companies and are working in development of sUAS operations in Mexico, El Salvador, California and Texas. These are all added areas in 2016 on top of UAS work with Idaho Transportation,

Idaho Commerce, INL, NIC, Simplot, Northrop Grumman and engineering firms and university research programs. EU has recently acquired Advanced Aviation Solutions (ADAVSO) LLC and together they have become the leading commercial UAS experts in Idaho and the Pacific Northwest. For more information please contact Mr. Brad Ward, President of Empire Unmanned, bradw@empireunmanned.com (509) 844-7775 or Steve Edgar, former President and CEO of ADAVSO, steve@adavso.com (208) 412-9651

Spring Fever

Continued from page 7

neurotransmitter. Along with joyful moods, it's responsible for the spike in the learning centers. Neurons snap, crackle, and pop with electrical transmissions that direct learning along neural pathways faster. Your mind says, "Bring it on" and you learn far more than you imagine.

Since you get outdoors more often this time of year, endorphins increase due to higher activity levels. Who doesn't like an endorphin high? The euphoria is long and legal, and contributes to higher motivation and focus. Endorphins circulate for several hours and can be boosted later in the day for another couple of hours. You don't have to duplicate that morning's workout either. An easy evening walk triggers the next release of endorphins, which help feed a brain hungry to learn.

Stress will rise when you push your training and cortisol swims in the blood stream. Fortunately, serotonin is a readily available neurotransmitter that reduces tension. For challenging instruction like spin training, here's serotonin to manage the anxiety after you stall the plane and kick hard rudder to drop over and view a sight picture of the nose pointed at the ground as a spin develops. Adrenaline screams. After you regain composure, a biochemical cocktail surfaces when

norepinephrine combines with dopamine to stimulate faster thinking, great for actually mastering stall-spin recoveries or tightening up crosswind landings with high gust factors. A brain primed for a positive learning loop is ready to take anything on with greater ease.

Deliberate mental attention to enhance skills and accuracy using the brain's biochemistry is what I call Mindful Aviating. Let the mind work for you. Keep learning high and stress low by activating the brain's biochemicals immediately after you demonstrate any excellence. Just take 10 seconds to focus on anything positive that you just successfully demonstrated. Those few seconds give dopamine time to discharge and synch the learning deep into your mind where it's reinforced. Ten seconds go a long way to amplify learning.

Learning curves come with difficulties of course. If you botch a landing or anxiety impairs thinking, here are a few tips that help. First, in order to face fear, like executing a three-revolution spin, remind yourself that 20 seconds of courage is all you need to get through anything. Take a deep breath and go for it. I know from spin training with Rich Stowell, no spin lasted longer than 20 seconds, although fear can make it feel like minutes. If anxious, deep-breathing techniques help calm you. When able, focus on your breathing for 10

inhales/exhales. Let go of thoughts and feelings. This allows the anxiety that just flooded your neocortex to drain and sweet serotonin (the tension reliever) returns again. Your brain cannot be both stressed and calm at the same time. Then laugh. It reduces stress hormones with an influx of dopamine. With a calm mind, dopamine resurges because, well, it's spring and there's an abundance of it. Focus on breathing, laugh, attend to what you're doing well, and return to the training mission at hand with a positive outlook.

No matter where your learning curve starts this spring, each moment of success ignites a positive chain-reaction learning loop that serves you well. Push your competency edge farther than ever because now you know how your brain is on your side. Make it work for you.

Eyes on the Skies

Continued from page 9

oxygen in your red blood cells, and costs less than \$20.

Remember to take care of your eyes and optimize your eyesight. More than ever they stand between you and an inflight emergency or disaster. You may need to get ADS-B out to fly the old Bugsmasher 200 above 10,000 ft. after 2020, but right now you are on your own with regard to drones when you fly low.



Mountain Flying Saftey

Continued from page 10

mountainous terrain, and develop a plan for immediate access to the equipment in the event of a post accident fire.

- FBO staff should be alert for customers who appear to be planning flight into mountainous terrain who could benefit from mountain flying instruction.

Interested in more information?

The reports for the accidents referenced in this safety alert are accessible by NTSB accident number from the Accident Database and Synopses web page at http://www.ntsb.gov/_layouts/ntsb.aviation/index.aspx.

Each accident's public docket is accessible from the NTSB's Docket Management System web page at <http://dms.ntsb.gov/pubdms/>.

For an overview of mountain flying and techniques, the Federal Aviation Administration (FAA) published Tips on Mountain Flying. (FAA-P-8740-60). Additionally, the May/June 2012 issue of FAASafety Briefing contains an article, [Rocky Mountain High: The Zen of Mountain Flying](#) that discusses both the beauty and dangers of mountain flying. The publications can be accessed from www.faa.gov.

Additionally, the Aircraft Owners and Pilots Association (AOPA) Air Safety Foundation provides a [Mountain Flying safety advisor](#) that highlights important considerations for mountain flying, [A Pilot's Guide to Mountain Flying](#) that discusses weather factors and mountain flying techniques, and

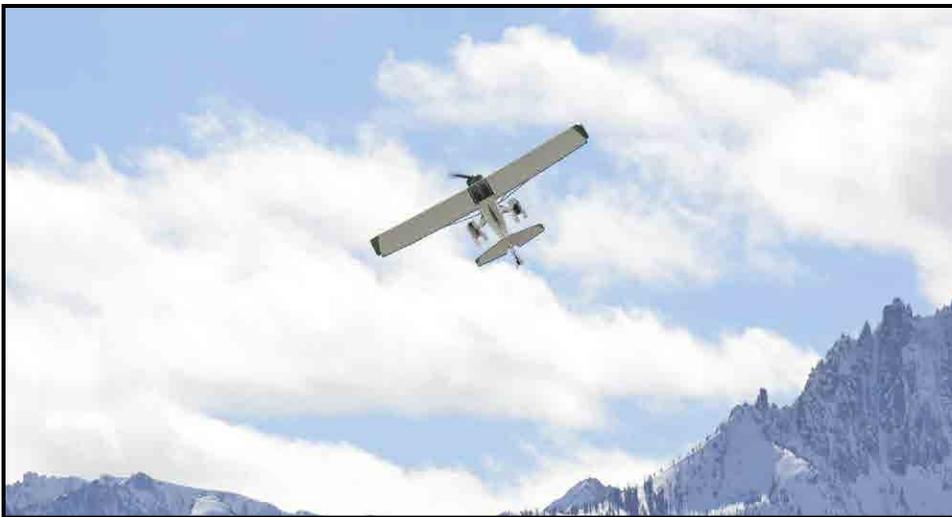
the ASF - [Mountain Flying resources](#) web page that lists preferred routes over mountainous terrain in addition to other resources. AOPA also offers a [Mountain Flying](#) online course. These resources can be accessed from www.aopa.org.

The Colorado Pilots Association provides [mountain flying resources](#) to assist pilots when flying in Colorado. These include mountain pass locations and names, certified flight instructors, and available training. These can be accessed from coloradopilots.org/.

This NTSB safety alert and others can be accessed from the NTSB's Safety Alerts web page at <http://www.ntsb.gov/safety/safety-alerts/Pages/default.aspx> or searched from the NTSB home page at <http://www.ntsb.gov/Pages/default.aspx>

Snow Much Fun!

Continued from page 3



Everywhere you looked there were lots of smiles and fun being had. The pilots, and even a student pilot, were in agreement that the state's first skiplane fly-in was a huge success!

I hope to see this event flourish in the coming years.



Cockpit Conversation

Continued from page 5

identified and determine if your mitigation strategy was appropriate and adequate. If not, you can determine what you would do the next time you encounter a similar threat.

In the next issue of the *Rudder Flutter*, I will present the TEAM model for dealing with unanticipated threats (such as airport closures, fires, equipment failures, life-threatening emergencies). Until then, put this portion of the model to work for you. It is simple, easy, and takes little time to employ.





Learn to Fly
the
BACKCOUNTRY

From Internationally
Experienced Professionals

**McCall Mountain/Canyon
Flying Seminars, LLC**

- Flight & ground training in mountains & canyons
- Learn how density altitude affects performance
- Experience runway gradients, sidehills, & doglegs
- Fly confidently in confining terrain
- Practice off-pavement operations

McCall Mountain Canyon Flying Seminars LLC
Located at the McCall Airport
104 South 3rd Street
P.O. Box 1175
McCall, Idaho 83638
Phone: (208) 634-1344
Fax: (501) 634-1348



www.MountainCanyonFlying.com

©George A. Kounis/www.pilotgetaways.com



TAKING YOUR REAL ESTATE EXPERIENCE TO NEW HEIGHTS

FLYING BROKERS | McCall, Idaho

Specializing In Recreational & Resort Real Estate For 23 Years

Mike Chapman

208.634.9691

Mike@FlyingBrokers.com

PAYETTE RIVER NO. 2



6 BUILDING LOTS - CLOSE TO MCCALL
Great location with big mountain views! Adjacent to North Valley Rail Trail. Private Payette River access, county maintained roads & private sewer. CC&R protected.
.37 AC TO 8 AC: \$43,900 TO \$99,900

COPENHAVER RANCH



BACKCOUNTRY RANCH LOT
Building lot in private 93 acre Wilderness Ranch, w/68 acre common area (Including private airstrip & jet boat access). South Fork Salmon River frontage, amazing views, seclusion, hunting & fishing. \$55,000

FRENCH CREEK SUB - CASCADE



FANTASTIC MTN & LAKE VIEW LOT!
1.73 acre, with 80 acre common area. Includes PRIVATE BOAT SLIP in a protected marina on Lake Cascade plus 3,400' PRIVATE LANDING STRIP. \$99,000

KINGS PINES ESTATES II



DON'T BUY A VIEW LOT UNTIL YOU SEE THIS ONE!
Payette Lake & Long Valley views from this 1.2 acre lot in Kings Pines Estates II. Septic approved. Gentle sloped lot offers privacy & a nice level building site. \$285,000



NEW CONSTRUCTION - AVAILABLE EARLY 2016!

2 ENERGY EFFICIENT HOMES
South facing, low maintenance homes located in Payette River Sub No. 2. Mountain views, river access. 1719 or 2193 sq ft. 3 BR, 2.5 BA, 2-car garage, large covered porches. \$379,900 & \$399,900

MCCALL MUNICIPAL AIRPORT - HANGAR# 553

West facing, 42' x 36' private hangar with 40' x 12' Schweiss bi-fold door. Epoxy floor paint, insulated, electric heat. No association fees! \$128,000

1566 MAJESTIC VIEW DRIVE



EXQUISITE CUSTOM RESIDENCE
Masterfully placed on 1.12 aspen covered acres. 3530 sq ft, 4 BR, 3.5 BA, 2-car garage. Gourmet kitchen. Landscaped. Peaceful. Private. No expense spared in planning & construction. Plans included for detached garage/shop/apartment. \$899,000



**Idaho Division of Aeronautics
3483 Rickenbacker / PO Box 7129
Boise, ID 83707-1129**

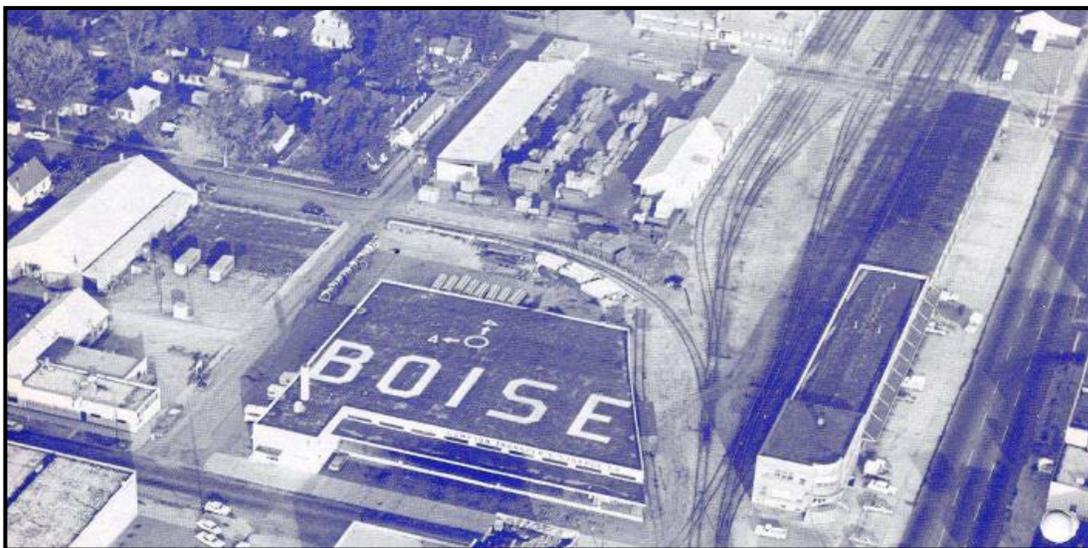


ADDRESS SERVICE REQUESTED

Blast from the Past

**From September, 1968,
Volume 24, No. 4**

A symbolic airmarker, installed on the Compton Transfer & Storage roof in Boise, was the last marker painted during the 1968 season by Department of Aeronautics contract crew. Jim Howard of Boise, and Kent Briggs of Carey, spent the summer pointing the names of southern Idaho town names to the sky, in bright yellow letters bordered in black, as a means of orientation to pilots crossing the state who might be confused due to weather, isolation, or remoteness of natural geographical areas. The small



circle is an international symbol for an airport and is even used on charts to indicate same. The arrow with numeral four (4) means the nearest airport is four miles in the direction

indicated by the arrow. In the case of Boise, the Municipal Airport, Bradley Field, and Stone Airport each measure four miles from the airmarker.

